

REMARKS

Applicant submits herewith a replacement specification paragraph wherein amendments are effected in the specification paragraph. Also accompanying this amendment is a reproduction of a paragraph of the original specification with markings indicating the amendments effected. No new matter is added. Entry of the replacement specification paragraph is respectfully requested.

The status of the claims is as follows:

Claims amended	:	1-3
Claims retained as is	:	None
Claims added	:	4-18
Claims cancelled	:	None
Claims now in this application	:	1-18
Independent claims now in this application (total 2)	:	1 and 10

It is also respectfully submitted that new claims 4-18 are now in condition for allowance for their recitation of a rotor magnet and a method of making a rotor magnet formed from a SmFeN magnetic powder and a resin binder. The features

in the claims directed to the particle size of the magnetic powder, the resin composition and the coating for the rotor magnet are set forth on pages 3, 5 and 6 of the original specification. Accordingly, no new matter is added.

Claims 1-3 are rejected under 35 U.S.C. 103(a) as allegedly being obvious over Masuda (4,250,421) in view of JP 5-299221. Applicants herein respectfully traverse this rejection of claims 1-3. For a rejection under 35 U.S.C. §103(a) to be sustained, the differences between the features of the combined references and the present invention must be obvious to one skilled in the art.

It is respectfully submitted that a *prima facie* case of obviousness has not been established in the rejection of claims 1-3. "To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on the applicant's

disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)."
MPEP §706.02(j) "Contents of a 35 U.S.C. §103 Rejection".

In the Office Action, the Examiner states that the Masuda reference discloses a stepping motor having a rotor magnet formed by molding a mixture of magnetic powder and resin. However, the Examiner admits that Masuda does not disclose that the magnetic powder is SmFeN. The Office Action states that JP '221 discloses that SmFeN magnetic powder can be used in a rotor or stator of a small motor. The Examiner then opines that it would have been obvious to one of ordinary skill in the art to provide Masuda with rotor magnets formed from a resin binder and a magnetic powder of SmFeN.

It is respectfully submitted that the Examiner has improperly combined the Masuda reference with JP '221. Masuda is directed to a stepping motor having magnets but Masuda simply does not teach magnets formed from a binder resin. The method in Masuda for making the magnets in the reference includes the steps of molding a magnetic powder and then sintering the powder. The resulting magnetic mass is cut into plates which are then etched resulting in a rotor magnet. (See col. 2, lines 51-57 and col. 3, lines 1 to 15 of Masuda). JP '221 is directed to a magnetic powder and a resin which are molded to form a plate which is then cut into strips. The individual strips are then curled or rolled to form a magnet. (See English abstract of JP 5-299-221). The references as combined do not teach

X the claimed method of making a rotor magnet by the steps of adding SmFeN magnetic powder to a resin binder, molding the resulting mixture to form a cylindrically shaped body and magnetizing portions of the circumference of the cylindrically shaped body at alternating positions to form a rotor magnet. The Examiner's proposed combination of references also does not teach a rotor magnet formed by the above-mentioned process.

The Examiner's rejection of claims 1-3 based on the above combination of Masuda with JP 5-299-221 is directed to an altogether different structure than the claimed invention. Also, the structure resulting from the Examiner's combination of references is directed to a magnet exhibiting different physical properties than that of the claimed invention. The claimed invention is formed by magnetizing a molded mixture of SmFeN and a binder resin thereby forming alternating North and South magnetic poles on the circumference of the magnet. The proposed combination of references does not teach magnetizing portions of the circumference of a molded cylindrical body. The above-described process steps result in a magnet having magnetic properties that are superior to conventional magnets that are larger in size than the claimed magnets. In addition, the since the magnets of the present invention can be made smaller than conventional magnets for a particular application, the pitch of the magnetization can be reduced and the number of magnetic poles required can be minimized. Accordingly, it is


Limitations
are not
in
original
claims

respectfully submitted that it would not have been obvious to one skilled in the art to modify the Examiner's proposed combination of references to arrive at either a rotor magnet made by the process steps set forth in claim 1 or the claimed method of making a rotor magnet. Therefore, reconsideration of the rejection of claims 1-3 is requested.

Applicant respectfully requests a one month extension of time for responding to the Office Action. Please charge the fee of \$ 110 for the extension of time to Deposit Account No. 10-1250.

In light of the foregoing, the application is now believed to be in proper form for allowance of all claims and notice to that effect is earnestly solicited. Please charge any deficiency or credit any overpayment to Deposit Account No. 10-1250.

Respectfully submitted,
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enc: Appendix I (Amended claims with amendments indicated by brackets and underlining)

Appendix II (Amended Specification paragraphs with Amendments indicated by brackets and underlining)

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APPENDIX I
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AMENDED CLAIMS WITH AMENDMENTS INDICATED THEREIN
BY BRACKETS AND UNDERLINING

Please amend claims 1-3 as follows:

1. (Amended) A rotor magnet [constituted by] made by a method
comprising the steps of:

[mixing] adding a magnetic powder comprising [of] SmFeN [in] to a resin
binder to form a mixture, [and]

molding [a] the mixture [thereof in a desired shape] to form a cylindrically
shaped body having an outer periphery defining a circumference of said rotor
magnet, and

magnetizing portions of said circumference of said rotor magnet to form
at least one North pole and at least one South pole at alternating positions along
said circumference of said rotor magnet.

2. (Amended) A motor [including] comprising a stator and the rotor
magnet according to claim 1.

3. (Amended) A stepping motor [including] comprising a stator and the
rotor magnet according to claim 1.

APPENDIX II**AMENDED SPECIFICATION PARAGRAPHS WITH AMENDMENTS
INDICATED THEREIN BY BRACKETS AND UNDERLINING**

Page 1: Third full paragraph, replace with the following:

It is well-known [well known] that as these permanent magnets a sintered body constituted by sintering a composite body derived from metal elements or a resin bonded magnet constituted by kneading both of a magnetic powder and a resin powder with the resin powder as a binder and molding a mixture thereof [(]have [been] often been employed. See Japanese Patent Publication No. 87634/1994[)].

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